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AGRICULTURAL RESEARCH ADMINISTRATION  
BUREAU OF ENTOMOLOGY AND PLANT QUARANTINE  
WASHINGTON 25, D. C.

In Cooperation with State, Federal and other Agencies

COTTON INSECT CONDITIONS FOR WEEK ENDING JULY 13, 1946.  
(Seventh Cotton Insect Survey Report for 1946)

This was the first week this summer when weather conditions were generally unfavorable for weevil development. In most of the States hot, dry weather helped greatly in checking the boll weevils. The boll weevil situation continues critical in most weevil-infested counties from the Atlantic Coast to Central Texas. All cotton growers should be prepared to dust with calcium arsenate when the weevils become abundant, if the prospects are good that a satisfactory crop can be made if weevils are controlled.

The bollworm has made its appearance in many areas. In some counties of Texas and Georgia it is reported as a serious threat. Where it occurs this pest may destroy the crop if a fight to control it by the application of insecticides is not made.

The cotton leafworm has now been found in 11 counties in southern Texas. It was found for the first time this season during the past week in Calhoun, Lavaca, Refugio and Victoria Counties. No heavy infestations have been reported.

In the Lower Rio Grande Valley of Texas good weather for cotton harvesting continued. Picking is under way at an unprecedented rate. Gins are running 24 hours per day and many of them are far behind schedule. The present prospects indicate that this may be the most valuable cotton crop in the Valley's history. According to the County Agent 23,000 bales had been ginned in Cameron County by July 12. It has been estimated that 55,000 bales of cotton have already been ginned in the four Valley Counties, Cameron, Hidalgo, Starr and Willacy. This is about one-third of the anticipated crop in that district. The Valley Morning Star of Harlingen, Texas stated on July 14: "The Valley has the lightest cotton insect infestation in its history. The lack of insect pests is due to the pink bollworm control measures, which include a September 1 stalk destruction deadline, to prevent overwintering of the pink bollworm."

The reports from the irrigated areas of the Southwest indicate that hemipterous insects have not become seriously abundant in southwest Texas, Arizona and New Mexico, but in some places in Arizona the growers have found it necessary to begin dusting.

BOLL WEEVIL

TEXAS: Hot, dry weather was favorable for cotton growth and reduction of weevil populations. Maximum temperatures ranged from 95° F. to 100° F. at Waco, with an average of 96.8° F. There was little rain in the State and crops in general are clean and well cultivated. Favorable weather, poisoning with calcium arsenate, and increased fruiting of cotton reduced the weevil infestation from an average of 70.9% last week to 49.3% this week in the vicinity of Waco.

Ginning is general in southern counties extending as far north as Cuero in DeWitt County. The average infestation in 434 fields examined in 53 counties was 46% punctured squares. Six fields in Calhoun and Nueces Counties in southern Texas were free of weevils. In 52 fields, largely in southern and central Texas, the boll weevil infestations were less than 10% punctured squares. In 63 fields the infestations ranged between 10% and 25%; in 103 fields the infestations ranged from 25 to 50%, and in 210 fields in 40 counties the infestations were over 50% punctured squares. The infestations averaged above 60% in Fannin, Grayson, Lamar, Williamson, Anderson, Cherokee, Hopkins, Houston, Madison, Nacogdoches, Raines, Red River, Van Zandt, Bee and Colorado Counties.

OKLAHOMA: In 93 fields in 19 counties the boll weevil infestation averaged 53% punctured squares. Boll weevils were found in all fields examined. In 57% of the fields more than 50% of the squares were punctured. The weevil situation in Oklahoma is serious. Unless hot, dry weather prevails, much calcium arsenate will have to be used to protect the crop.

LOUISIANA: Weather conditions continued favorable for weevil development in Louisiana and poisoning for weevil control was general. Calcium arsenate sales increased greatly during the week. It is doubtful if the present supply of calcium arsenate is adequate for all farmers to complete their poisoning programs. The supply of calcium arsenate-nicotine mixtures is limited.

The average boll weevil infestation in 178 fields in 12 counties in Louisiana was 41%. No punctured squares were found in 1% of the fields examined. In 10% of the fields, the infestation was less than 10% punctured squares; in 16% it was from 10 to 25%; in 39% it was from 25 to 50%; and in 34% of the fields the infestation was more than 50%. The heaviest infestations were reported in Bossier, Caddo, Richland, Natchitoches, Rapides and St. Landry Counties, but heavy infestations were also reported in Avoyelles, Red River, Ouachita, Grant, Acadia and Lafayette Counties. (ARKANSAS--See last page.)

MISSISSIPPI: Weather continued generally favorable for weevil development and weevils are more abundant now than in mid-July of 1945 or 1944. In the examinations of 118 fields in 13 Delta Counties no weevils were found in 63 fields in Bolivar, Coahoma, Holmes, Humphreys, Leflore, Quitman, Sharkey, Sunflower, Tallahatchie and Washington Counties. In 32 fields less than 10% of the squares were punctured, in 7 fields the infestation ranged from 10% to 25% punctured squares, in 10 fields from 25% to 50% punctured squares, and in only 6 fields located in Issaquena, Warren and Yazoo Counties did the infestation exceed 50% punctured squares. The boll weevil situation is critical in those three counties, as not only are the infestations high but weevils were found in all of the 24 fields examined. In the 6 fields examined in Warren County the infestations ranged from 40% to 82% punctured squares.

The average infestation in the infested fields in the Delta is now 19% as compared with 9.5% a year ago. The average infestation in all fields examined in the Delta is 9% as compared to 7% a year ago.



A cotton planting company in Bolivar County reports that weevils were found in 232 of 237 fields examined but in only 43 of these fields were more than 10% of the squares punctured and the highest infestation was 30% punctured squares. This company has not started dusting with calcium arsenate, but will soon begin dusting the fields with the heaviest infestations.

"It is estimated that recent rains destroyed around 15% of the planted acres of cotton in the Delta. In the upper Delta much cotton is unchopped or much smaller than grass growing along the drills. Some first generation weevils were noted in fields as far north as Washington County. Some poisoning is being done in the central and south Delta Counties."

On July 16 Dr. Clay Lyle, State College, Mississippi, reported regarding conditions throughout the State: "Rainy spell broken. Crop improving but weevils increasing. Weevils on 106 of the 174 farms examined in 27 counties with an average of 20% punctured squares in infested fields and 12% in all fields."

Reports from the State Plant Board show that heavy weevil infestations were in Chickasaw, Holmes, Monroe and Panola Counties.

GEORGIA: The boll weevil situation is serious. In the examination of 46 fields, mostly in the southern half of the State but including fields in Carroll, Fayette, Floyd, Hall, Haralson and Stephens Counties, no field was found with less than 19% punctured squares. However, the highest infestations reported were three fields with 56% punctured squares in Berrien, Carroll and Worth Counties. These were the only fields that had more than 48% punctured squares.

Hot, dry weather during the early part of the week was unfavorable for the boll weevil. Rains during the latter part of the week were sufficient to protect the weevils in squares on the ground. Much of the cotton in the southern counties is past its period of heavy fruiting. Most fields which have been poisoned show bolls well up into the top of the plants. In the earlier fields cotton is beginning to open.

SOUTH CAROLINA: Weather conditions were extremely variable during the week with scattered showers to heavy rains occurring over wide areas. The temperatures generally were below normal and conditions have been favorable for boll weevils. The reduction in average boll weevil infestation is doubtless partly due to the heavy fruiting of the cotton. First generation weevils are emerging in large numbers and the percent of infestation is likely to increase rapidly unless hot, dry weather prevails. Large supplies of calcium arsenate and calcium arsenate-nicotine mixtures are reported in Florence, Charleston, Leesville and Spartanburg. Boll weevils were found in 148 of the 150 fields examined in 20 counties in the southern, central and eastern sections of the State. However, in only 19 fields were more than 25% of the squares infested. These heavily infested fields were reported from Allendale, Richland, Kershaw, Saluda, Aiken, Bamberg, Florence, Orangeburg, Dorchester, Barnwell and Fairfield Counties.

NORTH CAROLINA: Weather conditions were extremely variable during the week, with scattered showers and heavy rains occurring over wide areas. Temperatures as a rule were below normal. Conditions generally were favorable for the boll weevils.

Weevils were found in 85 of the 100 fields examined in 15 southern and eastern counties, with an average infestation of 17% punctured squares. The average varied from 8.71% in Northampton County to 32.57% in Wilson County and 38.57% in Scotland County. Infestations exceeding 25% punctured squares were found in 22 of the fields examined in Scotland, Hoke, Wayne, Wilson, Robeson, Harnett, Cumberland, Johnston, Nash, Halifax, and Samson Counties.

#### COTTON LEAFWORM

Cotton leafworms were reported in Calhoun, Lavaca, Refugio and Victoria Counties, making a total of 11 infested counties in southern Texas. No serious outbreaks have been reported.

#### BOLLWORM

Bollworm eggs and larvae were more numerous in most fields in central Texas than during the previous week. The infestations extend as far north as Johnson County, just south of Fort Worth. A damaging infestation developed in one field near Waco, but other fields inspected in the area were lightly infested.

Bollworms are reported to be generally distributed over Georgia and some damage has occurred in local areas.

#### COTTON FLEA HOPPER

Cotton flea hoppers have decreased to below the damaging point in most fields in the Coastal Area and over a large section of central and south-central Texas where cotton approaches maturity and where continued dry weather prevails.

Cotton flea hoppers continued to increase in southern Oklahoma. Damaging numbers were reported in McCurtain and Pittsburg Counties.

#### MISCELLANEOUS INSECTS

APHIDS: Spotted, heavy infestations were reported in a few fields of young cotton in central Texas. Heavy infestations developed in one field of young cotton following two applications of calcium arsenate.

GRASSHOPPERS: Continued to do damage along edges of cotton fields in McLennan and Falls Counties, Texas. Many growers complain of not getting satisfactory control from poison baits.

Grasshoppers were reported moving into cotton fields from infested alfalfa in the Buckeye Area of the Salt River Valley, Arizona. Poison bait is being used for their control.

RED SPIDERS: Infestations have been reported from several areas in Georgia, but thus far the damage has been confined to small local areas. Light infestations have been reported in several fields in Texas.

CABBAGE LOOPER: (Trichoplusia ni (Hbn.)) These insects were found on cotton on the Fred Crook farm near Corpus Christi, Nueces County, Texas, on June 25, by M. E. Currie of this bureau. When abundant on cotton the cabbage looper is a serious pest and is often mistaken for the cotton leafworm, but it is not as easily controlled by the use of arsenical insecticides as the leafworm.

TOBACCO BUDWORM: (Heliothis virescens (F.)) These insects were found on cotton on the Rudolph Seim farm, 2 miles south of Yorktown, DeWitt County, Texas, on June 26 by H. E. Welker of this bureau. The tobacco budworm is closely related to the bollworm, Heliothis armigera (Hbn.) and is often mistaken for it. On cotton these insects have similar habits and the same control measures are used against them.

FULLER'S ROSE BEETLE: (Pantomorus godmani (Crotch)) was reported by T. L. Bissell, Entomologist, Experiment, Georgia, as occurring on cotton in Morgan and Pike Counties.

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July 18, 1946

#### BOLL WEEVIL

ARKANSAS: Weather conditions were favorable for crop growth in portions of the State, and considerable poisoning for weevil control was reported in the southeastern counties.

The average weevil infestation in 68 fields in 7 counties was 29%. Nine percent of the fields were not infested. In 18% the infestation was less than 10%; in 28% from 10 to 25%; in 22% it was from 25% to 50%; and in 23% of the fields the infestation was more than 50%. The heaviest infestations were reported in Miller, Lafayette, Hempstead, Chicot and Ashley Counties. Ten of the 15 fields examined in Drew and Lincoln Counties were infested.

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